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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,839	06/27/2005	Masanori Abe	Q88793	8993

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EXAMINER	
MILLER, DANIEL H	
ART UNIT	PAPER NUMBER
1794	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/540,839	ABE ET AL.	
	Examiner	Art Unit	
	DANIEL MILLER	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-7,11-19 and 22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-7,11-19 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

1. Claims 3-4, 7, 14-15, 18-19 and 22 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Young (6,586,087).

2. The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. In re Herz, 537 F.2d 549, 551-52,-190 USPQ 461,463 (CCPA 1976). "Absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising."" See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355.

3. Young teaches an article of manufacture that has a component (substrate) capable of being sealed with a copper aluminosilicate glass. The glass has a composition consisting essentially, in terms of weight percent on an oxide basis, of 35-68 SiO.sub.2, 3-25 Al.sub.2 O.sub.3, 2-26 B.sub.2 O.sub.3, 0-20 R.sub.2 O, 0-30 RO, 2-33 CuO, 0-4 F, 0-10 M.sub.x O.sub.y, where R.sub.2 O is an alkali oxide selected from the group consisting of Li.sub.2 O, Na.sub.2 O, and K.sub.2 O, and RO is an alkaline earth oxide selected from the group consisting of CaO, MgO, ZnO, SrO, and BaO, and M.sub.x O.sub.y is a transition metal oxide selected

from the group consisting of Co.sub.2 O.sub.3, TiO.sub.2, NiO, MnO.sub.2, and Fe.sub.2 O.sub.3. The present invention also pertains to a method of sealing the article (see abstract).

4. The compositional percentages taught overlaps applicant's claimed compositions, therefore the disclosure is considered to anticipate the reference. In the alternative, it would have been obvious to select a composition within the range as disclosed by applicant and taught by the reference (Young) since they overlap compositionally and percentage wise.

5. Regarding applicant's claimed to spherical protruded layers and zirconium and group 3a concentration, it appears from applicant's disclosure that the layers are formed inherently from the composition. Therefore, the same layering and protrusions as claimed by applicant would be expected in the disclosed invention of Young.

6. Claims 3-4, 7, 14-15, 18-19 and 22 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chiba (6,362,119).

7. The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. In re Herz, 537 F.2d 549, 551-52,-190 USPQ 461,463 (CCPA 1976). "Absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising."" See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355.

8. Chiba teaches a barium borosilicate glass which consists essentially of, as represented by mass% based on the following oxides:

9. B.sub.2 O.sub.3 5 to 35%, SiO.sub.2 0.5 to 30%, BaO 25 to 75%, Al.sub.2 O.sub.3 0.5 to 13%, SnO.sub.2 0 to 2%, CeO.sub.2 0 to 2%, MgO + CaO + SrO 0 to 10%, ZnO 0 to 20%, TiO.sub.2 0 to 5%, ZrO.sub.2 0 to 5%, Li.sub.2 O 0 to 5%, Na.sub.2 O 0 to 5%, and K.sub.2 O 0 to 5% (see abstract).

10. The compositional percentages taught overlaps applicant's claimed compositions, therefore the disclosure is considered to anticipate the reference. In the alternative, it would have been obvious to select a composition within the range as disclosed by applicant and taught by the reference since they overlap compositionally and percentage wise.

11. The glass is used on a coating in a variety of application (substrates), such as glaze for dishes or coatings for electronic components (column 1 line 5-10).

12. Regarding applicant's claimed to spherical protruded layers and zirconium and group 3a concentration, it appears from applicant's disclosure that the layers are formed inherently from the composition. Therefore, the same layering and protrusions as claimed by applicant would be expected in the disclosed invention of Chiba.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 5-6, 11-13, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiba (US 6,362,119) in view of Kub (US 6,323,108).

15. Chiba teaches a barium borosilicate glass which consists essentially of, as represented by mass% based on the following oxides:

B.sub.2 O.sub.3 5 to 35%, SiO.sub.2 0.5 to 30%, BaO 25 to 75%, Al.sub.2 O.sub.3 0.5 to 13%, SnO.sub.2 0 to 2%, CeO.sub.2 0 to 2%, MgO + CaO + SrO 0 to 10%, ZnO 0 to 20%, TiO.sub.2 0 to 5%, ZrO.sub.2 0 to 5%, Li.sub.2 O 0 to 5%, Na.sub.2 O 0 to 5%, and K.sub.2 O 0 to 5% (see abstract).

16. The compositional percentages taught overlaps applicant's claimed compositions, therefore the disclosure is considered to anticipate the reference in this regard. In the alternative, it would have been obvious to select a composition within the range as disclosed by applicant and taught by the reference since they overlap compositionally and percentage wise.

17. The glass is used on a coating in a variety of applications (substrates), such as glaze for dishes or coatings for electronic components (column 1 line 5-10).

18. However the reference is silent as to an intermediate SiO2 layer.

19. Kub teaches a common configuration for an electrical device (semiconductor) with a silicon substrate and a SiO2 interlayer (see figures). It would have been obvious to use the sealing layer of Chiba in the electrical device of Kub providing a SiO2 interlayer because it is a common and known electrical (semiconductor) configuration and the coatings of Chiba are taught to be employed for electrical devices.

20. The claimed molten layer would inherently form when the melted top layer of Chiba is formed over the SiO2 layer of Kub.

Response to Arguments

21. Applicant's arguments filed 2/14/2008 have been fully considered but they are not persuasive.

22. Applicant is reminded that the claim language "consisting essentially of" is interpreted as "comprising". Applicant has made no showing that the included material affects the basic and novel characteristics of the invention. Therefore, the claim language is properly interpreted as "comprising" (see below). The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. In re Herz, 537 F.2d 549, 551-52,-190 USPQ 461,463 (CCPA 1976). "Absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising."" See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355.

23. Regarding the 103 rejection, Kub teaches a common configuration for an electrical device (semiconductor) with a silicon substrate and a SiO2 interlayer (see figures). It would have been obvious to use the sealing layer of Chiba in the electrical device of Kub providing a SiO2 interlayer because it is a common and known electrical (semiconductor) configuration and the coating of Chiba are taught to be employed for electrical devices.

24. Applicant has further argued the intended use of the claimed invention, while pointing to the instant specification. The intended use of the invention does not patentably distinguish the claims. Further, these arguments are non commensurate in scope with the claimed invention.

Similarly applicant's arguments with regards to diffusion of copper and softening points are also non commensurate in scope with the claim.

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL MILLER whose telephone number is (571)272-1534. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571)272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel Miller

/KEITH D. HENDRICKS/
Supervisory Patent Examiner, Art Unit 1794